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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	10/768,976
Filing Date	January 30, 2004
First Named Inventor	Wood, Keith
Group Art Unit	1653
Examiner Name	

Sheet 1 of 2

Attorney Docket No: 341.020US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date if Appropriate
RK /	US-2002/0137171	09/26/2002	Short et al.	435	196	11/30/2001
/	US-5,372,944	12/13/1994	Swanson, P.	435	252.1	10/14/1993
/	US-5,576,424	11/19/1996	Mao et al.	536	17.9	11/08/1994

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
/	WO-02/083937	10/24/2002	Kiddle, S.	C12Q	1/48	
/	WO-02/28841A2	04/11/2002	Haugland, R., et al.	C07D	239/91	
/	WO-02/057411A2	07/25/2002	Short, J., et al.	C12N		
/	WO-02/068583A2	09/06/2002	Short, J. M.	C12N	9/14	
/	WO-98/36080	08/20/1998	Affholter, J., et al.	C12N	15/55	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	/	ADACHI, H., et al., "Site-directed mutants, at position 166, of RTEM-1 beta-lactamase that form a stable acyl-enzyme intermediate with penicillin", <u>J Biol Chem.</u> , 266(5), (Feb 1991), pp. 3186-91	
	/	ARAVIND, L., "An evolutionary classification of the metallo-beta-lactamase fold proteins", <u>In Silico Biol.</u> , 1(2), (1999), pp. 69-91	
	/	BIER, C., "Covalys - one tag does it all", <u>Bio World</u> , (2003), pp. 46-47	
	/	BOSMA, et al., "Biodegradation of 1,2,3-trichloropropane through directed evolution and heterologous expression of a haloalkane dehalogenase gene", <u>Appl Environ Microbiol.</u> (Jul 2002), pp. 3582-7	
	/	CHALOUPOVA, R., "Modification of activity and specificity of haloalkane dehalogenase from <i>Sphingomonas paucimobilis</i> UT26 by engineering of its entrance tunnel", <u>J Biol Chem.</u> , (Dec 26 2003), pp. 52622-8	
	/	CHEN, C., "Relocation of the catalytic carboxylate group in class A beta-lactamase: the structure and function of the mutant enzyme Glu166->Gln:Asn170->Asp.", <u>Protein Eng.</u> , 12(7), (July 1999), pp. 573-9	
	/	FRANKEN, S., et al., "Crystal structure of haloalkane dehalogenase: an enzyme to detoxify halogenated alkanes", <u>EMBO J.</u> , 10(6), (June 1991), pp. 1297-302	
	/	GRAY, K., et al., "Rapid evolution of reversible denaturation and elevated melting temperature in a microbial haloalkane dehalogenase", <u>Adv. Synth. Catal.</u> , (2001), pp. 607-17	
	/	GRIFFIN, B. A., et al., "Specific covalent labeling of recombinant protein molecules inside live cells", <u>Science</u> , 281(5374), (July 1998), pp. 269-72	

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RV	/	KEPPLER, A. , et al., "A general method for the covalent labeling of fusion proteins with small molecules in vivo", <u>Nature Biotechnology</u> , 21 , (January 2003), pp. 86-9	
	/	KROOSHOF, G. , et al., "Repositioning the catalytic triad aspartic acid of haloalkane dehalogenase: effects on stability, kinetics, and structure", <u>Biochemistry</u> , 36 (31), (August 1997), pp. 9571-80	
	/	KULAKOVA, A. , "The plasmid-located haloalkane dehalogenase gene from <i>Rhodococcus rhodochrous</i> NCIMB 13064", <u>Microbiology</u> , 143 (Pt 1), (January 1997), pp. 109-15	
	/	PIETERS, R. , et al., "Design and synthesis of reagents for phage display screening of dehalogenases", <u>Bioorg Med Chem Lett.</u> , 9 (2), (January 1999), pp. 161-6	
	/	PRIES, F. , et al., "Histidine 289 is essential for hydrolysis of the alkyl-enzyme intermediate of haloalkane dehalogenase", <u>J Biol Chem.</u> , 270 (18), (May 1995), pp. 10405-11	
	/	STROFFEKOVA, K. , et al., "The protein-labeling reagent FLASH-EDT2 binds not only to CCXXCC motifs but also non-specifically to endogenous cysteine-rich proteins", <u>Pflugers Arch.</u> , 442 (6), (September 2001), pp. 859-66	
	/	WADA, K. , et al., "Codon usage tabulated from the GenBank genetic sequence data", <u>Nucleic Acids Res.</u> , (May 1992), pp. 2111-8	
	/	WINBERG, J. , "The catalytic triad in short-chain dehydrogenases", <u>Dept. of Biochemistry, Institute of Medical Biology, University of Tromso</u> , Abstract, (November 2002), 2 pgs.	
✓	/	ZAWADZKE, L. , "Elimination of the hydrolytic water molecule in a class A beta-lactamase mutant: crystal structure and kinetics", <u>Biochemistry</u> , (December 1996), pp. 16475-82	

EXAMINER

Joanne Koss

DATE CONSIDERED

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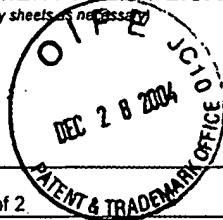
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Examiner Name	Unknown

Attorney Docket No: 341.020US1

US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date if Appropriate
RK ✓	US-5,503,977	04/02/1996	Johnsson, N., et al.	04/22/1994
✓	US-5,523,209	06/04/1996	Ginsberg, M. H., et al.	03/14/1994
✓	US-5,700,908	12/23/1997	Ruoslahti, E. I., et al.	06/01/1995
✓	US-5,821,047	10/13/1998	Garrard, I. J., et al.	06/05/1995
✓	US-5,932,421	08/03/1999	Ginsberg, M. H., et al.	10/09/1997
✓	US-6,333,154	12/25/2001	Ladant, D., et al.	12/01/1998

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T ²
✓	WO-01/60415A1	08/23/2001	Lollo, C. P., et al.	
✓	WO-2004/009788A2	01/29/2004	Tozer, E., et al.	
	WO-2004/072232A2	08/26/2004	Wood, K. V., et al.	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ¹
	✓	The Second Symposium on Biological Imaging: New Dimensions in In Vivo Imaging, Lecturer Abstracts, obtained from www.promega-rd.info/bioimage2003/abstracts/lecture/default.asp (2003), 5 Pages	
	✓	"International Search Report from corresponding PCT Application No. PCT/US2004/002607", (October 26, 2004), 4 Pages	
	✓	AFFHOLTER, J. A., et al., "Recombinant Haloaliphatic Dehalogenases", <u>EMBL Database</u> , Genetic Sequence, Entry Name: EMBL:BD057138, (Sep. 4, 2002), 1 p.	
	✓	BARRETT, A. G., et al., "Synthesis and Characterization of a New Polymer Support for a Metallocene Catalyst", <u>Tetrahedron</u> , 58, (May 6, 2002), 3785-3792	
	✓	CAMPBELL, R. E., et al., "A Monomeric Red Fluorescent Protein", <u>PNAS</u> , 99(12), (2002), 7877-7882	
	✓	FARINAS, J., et al., "Receptor-mediated Targeting of Fluorescent Probes in Living Cells", <u>The Journal of Biological Chemistry</u> , 274(12), (1999), 7603-7606	
	✓	GAMBHIR, S. S., "Molecular Imaging of Cancer With Positron Emission Tomography", <u>Nature Reviews</u> , 2, (2002), 683-693	
	✓	GITE, S., et al., "Ultrasensitive Fluorescence-Based Detection of Nascent Proteins in Gels", <u>Analytical Biochemistry</u> , 279, (2000), 218-225	
	✓	GURSKAYA, N. G., et al., "GFP-like Chromoproteins as a Source of Far-red Fluorescent Proteins", <u>FEBS Letters</u> , 507, (2001), 16-20	
✓	✓	HOLLOWAY, P., et al., "A Colorimetric Assay for Detecting Haloalkine Dehalogenase Activity", <u>Journal of Microbiological Materials</u> , 32, (1998), 31-36	

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Resanne Kossin

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	First Named Inventor	Wood, Keith
	Group Art Unit	1653
	Examiner Name	Unknown
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OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
RE	✓	HYNKOVA, K. , et al., "Identification of the Catalytic Triad in the Haloalkane Dehalogenase from <i>Sphingomonas paucimobilis</i> UT26", <u>FEBS Letters</u> , 446, (Mar. 5, 1999),177-181	
	✓	ICHIYAMA, S. , et al., "Novel Catalytic Mechanism of Nucleophilic Substitution by Asparagine Residue Involving Cyanoalanine Intermediate Revealed by Mass Spectrometric Monitoring of an Enzyme Reaction", <u>Journal of Biological Chemistry</u> , 275, (Dec. 29, 2000),40804-40809	
	✓	KURIHARA, T. , et al., "Comprehensive Site-directed Mutagenesis of L-2-Halo Acid Dehalogenase to Probe Catalytic Amino Acid Residues", <u>Journal of Biochemistry</u> , 117, (Mar. 15, 1995),1317-1322	
	✓	LIN, Z. , et al., "Methods for Labeling Quantum Dots to Biomolecules", <u>Journal of Nanoscience and Nanotechnology</u> , 4(6), (2004),641-645	
	✓	MATHIEU, S. , et al., "Monitoring E-Selection-Mediated Adhesion Using Green and Red Fluorescent Proteins", <u>Journal of Immunological Methods</u> , 272, (2003),81-92 54, 61, 75 & 79.	
	✓	MICHL, J. , et al., <u>Electronic Aspects of Organic Photochemistry</u> , (John Wiley & Sons, 1990),61-78	
	✓	PRIES, F. , et al., "Activation of an Asp-124-> Asn Mutant of Haloalkane Dehalogenase by Hydrolytic Deamidation of Asparagine", <u>FEBS Letters</u> , 358, (1995),171-174	
	✓	PULIG, O. , et al., "The Tandem Affinity Purification (TAP) Method: A General Procedure of Protein Complex Purification", <u>Methods</u> , 24, (2001),218-229	
	✓	SANTRA, S. , et al., "Luminescent Nanoparticle Probes for Bioimaging", <u>Journal of Nanoscience and Nanotechnology</u> , 4(6), (2004),590-599	
	✓	WEISSELEDER, R. , et al., "Shedding Light Onto Live Molecular Targets", <u>Nature Medicine</u> , 9(1), (2003),123-128	
	✓	YANG, G. , et al., "Identification of Active Site Residues Essential to 4-Chlorobenzoyl-Coenzyme A Dehalogenase Catalysis by Chemical Modification and Site Directed Mutagenesis", <u>Biochemistry</u> , 35, (1996),10879-10885	
✓	✓	YANG, M. , et al., "Whole-Body Optical Imaging of Green Fluorescent Protein-Expressing Tumors and Metastases", <u>PNAS</u> , 97(3), (2000),1206-1211	

EXAMINER

Kerianne Koon

DATE CONSIDERED

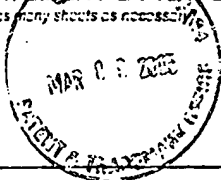
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US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Filing Date If Appropriate
RLK	US-5,110,833	05/05/1992	Mosbach, K.	02/28/1990
/	US-5,786,428	07/28/1998	Arnold, F. H., et al.	03/27/1996
/	US-6,255,461	07/03/2001	Mosbach, K., et al.	04/05/1996

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	T ²
/	WO-04/072232A2	08/26/2004	Wood, K. V., et al.	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

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/	✓	DOUBROVIN, M., et al., "Reviews - Multimodality in Vivo Molecular-Genetic Imaging", <u>Bioconjugate Chem.</u> , 15, (2004),1376-1388	
/	✓	GOULD, K. L., et al., "Tandem Affinity Purification and Identification of Protein Complex Components", <u>Methods</u> , 33, (2004),239-244	
/	✓	HALL, D. A., et al., "Regulation of Gene Expression by a Metabolic Enzyme", <u>Science</u> , 306, (2004),482-484	
/	✓	HUBER, W., et al., "SPR-based Interaction Studies With Small Molecular Weight Ligands Using hAGT Fusion Proteins", <u>Analytical Biochemistry</u> , 333, (2004),280-288	
/	✓	KWON, Y., et al., "Antibody Arrays Prepared by Cutinase-Mediated Immobilization on Self-Assembled Monolayers", <u>Anal. Chem.</u> , 76, (2004),5713-572-	
/	✓	LI, Q., et al., "A Modified Mammalian Tandem Affinity Purification Procedure to Prepare Functional Polycystin-2 Channel", <u>FEBS Letters</u> , 576, (2004),231-236	
/	✓	LUO, X.-L., et al., "A Glucose Biosensor Based on Chitosan-Glucose Oxidase-Gold Nanoparticles Biocomposite Formed by One-Step Electrodeposition", <u>Analytical Biochemistry</u> , 334, (2004),284-289	
/	✓	ROHILA, J. S., et al., "Improved Tandem Affinity Purification Tag and Methods for Isolation of Protein Heterocomplexes from Plants", <u>The Plant Journal</u> , 38, (2004),172-181	
/	✓	VINCZE, L., et al., "Three-Dimensional Trace Element Analysis by Confocal X-Ray Microfluorescence Imaging", <u>Analytical Chemistry</u> , 76, (2004),6786-6791	
/	✓	WANG, H.-Z., et al., "Detection of Tumor Marker CA125 in Ovarian Carcinoma Using Quantum Dots", <u>Acta Biochimica et Biophysica Sinica</u> 2004, 36(10), (2004),681-686	

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Rosanne Kisor

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